

AMENDMENTS TO THE CLAIMS

Please cancel Claims 16-18 and 22; amend Claims 1, 3, 4, 6, 8, 9, 11-14, 19, 25, 27, 29 and 30; and, add new Claims 31-34 as follows.

LISTING OF CLAIMS

1. (currently amended) An air conditioner for a vehicle, comprising:

a non-contact temperature sensor that detects a temperature in a predetermined area of a passenger compartment in non contact;

a control unit that controls an air state in the passenger compartment based on at least the temperature detected by the non-contact temperature sensor;

[[a]] determining means for determining whether or not the temperature detected by the non-contact temperature sensor ~~is abnormal~~ corresponds to an actual temperature of the passenger compartment; and

[[a]] notifying means for notifying a passenger whether the temperature detected by the non-contact temperature sensor ~~is abnormal~~ does not correspond to the actual temperature of the passenger compartment.

2. (withdrawn) The air conditioner according to claim 1, wherein the non-contact temperature sensor is disposed at an attachment position that is changeable in the passenger compartment.

3. (currently amended) The air conditioner according to claim 1, wherein the notifying means is a light emitting device that is arranged at a position [[near]] adjacent the non-contact temperature sensor.

4. (currently amended) The air conditioner according to claim 1, wherein the determining means determines whether the temperature detected by the non-contact temperature sensor at the present time is ~~abnormal~~, does not correspond to the actual temperature of the passenger compartment based on a temperature detected by the non-contact temperature sensor at a time before a predetermined time period from the present time.

5. (withdrawn) The air conditioner according to claim 1, further comprising a temperature displaying portion that displaces a set temperature for controlling the air state in the passenger compartment, wherein the notifying means displaces a determination result of the determining means by using the temperature displaying portion.

6. (currently amended) The air conditioner according to claim 1, further comprising environment condition detection means for detecting an environment condition except for the temperature detected by the non-contact temperature sensor, wherein:

the control unit controls the air state in the passenger compartment based on the temperature detected by the non-contact temperature sensor and the environment condition detected by the environment condition detection means; and

the determining means determines whether the temperature detected by the non-contact temperature sensor ~~is normal~~, corresponds to the actual temperature of the passenger compartment based on the environment condition detected by the environment condition detection means.

7. (withdrawn) The air conditioner according to claim 6, wherein the environment condition detection means is a solar radiation detection means for detecting a solar radiation amount entering into the passenger compartment.

8. (currently amended; withdrawn) The air conditioner according to claim 1, wherein the determining means determines whether the temperature detected by the non-contact temperature sensor ~~is normal~~, corresponds to the actual temperature of the passenger compartment based on whether the temperature detected by the non-contact temperature sensor ~~becomes~~ is within a predetermined range for a predetermined time.

9. (currently amended) ~~The air conditioner according to claim 1, wherein~~ An air conditioner for a vehicle, comprising:

a non-contact temperature sensor that detects a temperature in a predetermined area of a passenger compartment in non contact;

a control unit that controls an air state in the passenger compartment based on at least the temperature detected by the non-contact temperature sensor;

determining means for determining whether or not the temperature detected by the non-contact temperature sensor is abnormal; and

notifying means for notifying a passenger whether the temperature detected by the non-contact temperature sensor is abnormal; wherein

the determining means determines whether the temperature detected by the non-contact temperature sensor ~~is normal~~, corresponds to the actual temperature of the passenger compartment based on whether a state where the temperature detected by the non-contact temperature sensor is within a predetermined range ~~is continued~~ for a predetermined time.

10. (original) The air conditioner according to claim 1, wherein the predetermined area includes a plurality of temperature detection ranges.

11. (currently amended; withdrawn) The air conditioner according to claim 6, wherein:

the environment condition detection means includes an outside air detection means for detecting a temperature of outside air outside the passenger compartment; and

the determining means determines that the temperature detected by the non-contact temperature sensor ~~is normal~~ corresponds to the actual temperature of the passenger compartment when the temperature detected by the non-contact temperature sensor ~~is close~~ corresponds to the temperature of outside air, detected by the outside air temperature sensor.

12. (currently amended; withdrawn) The air conditioner according to claim 1, further comprising

an opening state determining unit for determining an opening state of a door or a window of the vehicle,

wherein the determining means determines that the temperature detected by the non-contact temperature sensor ~~is normal~~, corresponds to the actual temperature of the passenger compartment when the opening state determining unit determines the opening state of the door or the window.

13. (currently amended; withdrawn) The air conditioner according to claim 1, wherein:

when the determining means determines that the temperature detected by the non-contact temperature sensor ~~is abnormal~~ does not correspond to the actual temperature in the passenger compartment, a provisional temperature is set as the temperature in the predetermined area, and the control unit controls the air state in the passenger compartment based on the provisional temperature.

14. (currently amended) The air conditioner according to claim 1, wherein the determining means determines whether the temperature detected at the present time by the non-contact temperature sensor ~~is abnormal~~ does not correspond to the actual temperature in the passenger compartment, based on the temperature detected at the last a previous time by the non-contact temperature sensor and the temperature detected at the present time by the non-contact temperature sensor.

15. (withdrawn) The air conditioner according to claim 1, wherein:

the non-contact temperature sensor is arranged in a dashboard of the passenger compartment to face a driver's seat area, at a side opposite to a steering wheel with respect to a center portion of the dashboard in a vehicle lateral direction.

16.-18. (cancelled)

19. (currently amended) An air conditioner for a vehicle, comprising:

a non-contact temperature sensor that detects a temperature in a predetermined area of a passenger compartment in non contact;

environment condition detection means for detecting an environment condition except for the temperature detection by the non-contact temperature sensor;

[[a]] control means for controlling an air state in the passenger compartment based on the temperature detected by the non-contact temperature sensor and the environment condition detected by the non-contact temperature sensor; and

[[a]] determining means for determining whether the temperature detected by the non-contact temperature sensor is normal, based on the environment condition detected by the environment condition detection means; wherein

the environment condition detection means includes an outside air detection means for detecting a temperature of outside air outside the passenger compartment; and

the determining means determines that the temperature detected by the non-contact temperature sensor is normal when the temperature detected by the non-contact temperature sensor corresponds to the temperature of the outside air, detected by the outside air temperature sensor.

20. (withdrawn) The air conditioner according to claim 19, wherein the environment condition detection means is a solar radiation detecting means for detecting a solar radiation amount entering into the passenger compartment.

21. (original) The air conditioner according to claim 19, wherein the predetermined area includes a plurality of temperature detection ranges.

22. (cancelled)

23. (withdrawn) The air conditioner according to claim 19, further comprising an opening state determining unit for determining an opening state of a door or a window of the vehicle,

wherein the determining means determines that the temperature detected by the non-contact temperature sensor is normal, when the opening state determining unit determines the opening state of the door or the window.

24. (withdrawn) The air conditioner according to claim 19, wherein:

when the determining means determines that the temperature detected by the non-contact temperature sensor is abnormal, a provisional temperature is set as the temperature in the predetermined area, and the control unit controls the air state in the passenger compartment based on the provisional temperature.

25. (currently amended) A control process of a computer for a vehicle air conditioner that includes a non-contact temperature sensor for detecting a temperature of a predetermined area in a passenger compartment of the vehicle in non-contact and a control unit for controlling an air state in the passenger compartment based on the temperature detected by the non-contact temperature sensor, the control process comprising:

determining whether the temperature detected by the non-contact temperature sensor ~~is abnormal~~ does not correspond to the actual temperature in the passenger compartment; and

notifying a determination result in the determining step to a passenger in the passenger compartment.

26. (withdrawn) The control process according to claim 25, wherein an attachment position of the non-contact temperature sensor is changeable.

27. (currently amended) A control process for a computer of a vehicle air conditioner, which controls an air conditioning state in a passenger compartment based on a signal from a non-contact temperature sensor that detects a temperature in a

predetermined area of the passenger compartment in non contact and a signal from environment condition detection means for detecting an environment condition in the passenger compartment except for the temperature detected by the non-contact temperature sensor, the control process comprising

determining whether or not the temperature detected by the non-contact temperature sensor ~~is normal~~ corresponds to the actual temperature of the passenger compartment based on the signal from the environment condition detection means.

28. (withdrawn) The control process according to claim 27, wherein the environment condition detection means is a solar radiation detection means for detecting a solar radiation amount entering into the passenger compartment.

29. (currently amended; withdrawn) The control process according to claim 27, further comprising

setting a provisional temperature as the temperature in the predetermined area when it is determined that the temperature detected by the non-contact temperature sensor ~~is abnormal~~ does not correspond to the actual temperature in the passenger compartment in the determining step; and

controlling an air conditioning state in the passenger compartment based on the provisional temperature when it is determined that the temperature detected by the non-contact temperature sensor ~~is abnormal~~ does not correspond to the actual temperature in the passenger compartment in the determining.

30. (currently amended) The control process according to claim 27, further comprising

notifying that the temperature detected by the non-contact temperature sensor in the predetermined area ~~is abnormal~~ does not correspond to the actual temperature in the passenger compartment when it is determined that the temperature detected by the non-contact temperature sensor ~~is abnormal~~ does not correspond to the actual temperature in the passenger compartment in the determining.

31. (new) The air conditioner according to claim 1, further comprising
an outside air temperature sensor for detecting a temperature of outside air of the passenger compartment, wherein

even when the temperature detected by the non-contact temperature sensor does not correspond to the actual temperature of the passenger compartment, the notifying means does not notify a passenger in the passenger compartment when the temperature of outside air detected by the outside air temperature sensor is lower than a predetermined air temperature.

32. (new) the air conditioner according to claim 31, further comprising
a water temperature sensor for detecting a temperature of water for cooling a vehicle engine, wherein

even when the temperature detected by the non-contact temperature sensor does not correspond to the actual temperature of the passenger compartment, the notifying means does not notify a passenger in the passenger compartment when the

temperature of outside air detected by the outside air temperature sensor is lower than the predetermined air temperature and when the temperature of water detected by the water temperature sensor is lower than a predetermined water temperature.

33. (new) The control process according to claim 25, wherein the determining step includes determining whether the temperature detected by the non-contact temperature sensor corresponds to the actual temperature of the passenger compartment based on whether a state where the temperature detected by the non-contact temperature sensor is within a predetermined range for a predetermined time.

34. (new) The control process according to claim 27, wherein:
the environment condition detection means detects a temperature of outside air outside the passenger compartment; and
the determining step includes determining that the temperature detected by the non-contact temperature sensor corresponds to the actual temperature of the passenger compartment when the temperature detected by the non-contact temperature sensor corresponds to the temperature of the outside air.